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ABSTRACT

Interrelations between childhood behavior problems and adolescent temperament, and between adolescent temperament and problem behaviors, were studied. A sample of 311 adolescents with an average age of 15.7 years completed self-report measures regarding behavior problems before age 13, temperament, alcohol consumption, alcohol-related problems, delinquency, and depressive symptomatology. Interrater agreement between adolescents and their primary caregtivers with regard to childhood behavior problems was .48. Correlations between childhood behavior problems and adolescent temperament indicated significant associations. Childhood hyperactivity correlated with adolescent general activity level. Childhood peer dysfunction correlated with adolescent mood quality and flexibility. Adolescent temperament was found to correlate significantly with all of the adolescent problem behavior correlates. In general, a difficult temperament profile was associated with both childhood and adolescent behavior problems. This finding suggests a degree of continuity in temperamental behaviors associated with maladjustment during childhood and adolescence. (RH)

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ADOLESCENT TEMPERAMENT: CHILDHOOD PROBLEM PRECURSORS AND PROBLEM BEHAVIOR CORRELATES[1]

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ABSTRACT

A sample of 311 adolescents (average age = 15.7 yrs.) completed self-report measures regarding childhood behavior problems occurring before age 12, current temperament, alcohol consumption, alcohol-related problems, delinquency, and depressive symptomatology. Interrater agreement between adolescents and their primary caregivers with regard to childhood behavior problems was .48. Pearson correlations between childhood behavior problems and adolescent temperament indicated significant associations, including some degree of specificity. For example, childhood hyperactivity correlated r = .56 with adolescent general activity level and childhood peer dysfunction correlated r = -.21 with adolescent mood quality and r = -.18 with flexibility. Adolescent temperament was also found to correlate significantly with all of the adolescent problem behavior correlates, suggesting interrelations with both externalizing and internalizing features of adolescent problem behaviors.

INTRODUCTION

Research on individual differences in temperament has found associations between temperament and infant and child psychological health (Thomas & Chess, 1977), resilience to stress (Werner & Smith, 1982), coping with medical illness and hospitalization (Rutter, 1983), and adaptive coping styles (Garmezy, 1981). Although a large portion of the existing research on temperament has focused on infants and children, there are an increasing number of studies that have targeted adolescents and early adults (e.g., Burks & Rubenstein, 1979; Chess & Thomas, 1984; Lerner & Lerner, 1983; Windle, et al., 1986). Collectively, this research has indicated similar findings as those found in infancy and childhood; that is temperamental functioning during

adolescence is associated with features of dysfunction (e.g., depression, lower mental health, poor academic performance) and features of adaptation (e.g., perceived self-competence).

There is, nevertheless, a need to further examine the antecedents, correlates, and consequences of adolescent temperament so as to assess its origins, structure, and functional significance in a variety of contexts across the lifespan. The current paper is directed toward two main objectives. First, the interrelations between childhood behavior problems and adolescent temperament were investigated. Childhood behavior problems were measured retrospectively by the hyperactivity and minimal brain dysfunction (HK/MBD) questionnaire (Tarter et al., 1977; Wender, 1971) and temperament was measured by the Revised Dimensions of Temperament Survey (DOTS-R) (Windle & Lerner, 1986). The HK/MBD was completed both by adolescents and their primary caregivers, thus permitting the derivation of a measure of interrater agreement. The second objective of the study was to investigate the interrelations between adolescent temperament and adolescent problem behaviors. Problem behaviors included alcohol consumption, alcohol-related problems, delinquent behaviors, and depressive symptomatology.

METHOD

Subjects. The data presented are part of a two-year, four-occasion of measurement longitudinal research design pertaining to vulnerability factors and adolescent drinking. A principal objective of the study is to assess the initiation, escalation, and continuation (or termination) of drinking behavior for adolescents in relation to a range of vulnerability, or high risk, factors. The data reported on in this study are from the first occasion of

measurement and the sample consists of 311 sophomores and juniors (61% females; average age = 15.7 yrs.; 97% white).

Measures. Temperament was measured by the Revised Dimensions of Temperament Survey (DOTS-R) (Windle & Lerner, 1986). The DOTS-R is a 54 item, self-report measure that assesses the ten temperament dimensions of Activity Level-General, Activity Level-Sleep, Approach Withdrawal, Flexibility-Rigidity, Quality of Mood, Distractibility, Persistence, Rhythmicity-Sleep, Rhythmicity-Eating, and Rhythmicity-Daily Habits. Factorial validity, reliability estimates, and external validity for the DOTS-R have been provided in several publications (e.g., Windle, 1989; Windle et al., 1986; Windle & Lerner, 1986).

Childhood behavior problems were measured by the HK/MBD Questionnaire which assesses the four dimensions of hyperactivity/impulsivity, attentional/socialization problems, antisocial behavior, and learning problems, as well as yielding a composite score of childhood behavior problems (e.g., Sher & Alterman, 1988; Tarter et al., 1977; Wender, 1971). The HK/MBD is completed retrospectively with reference to problem behaviors occurring prior to age 12.

The alcohol consumption index yielded a score of the daily average amount of ethanol consumed in the last 30 days. Alcohol-related problems were measured by the frequency of occurrence of 13 items related to heavy alcohol use over the last six months (e.g., problems with family, friends, legal authorities, missing school, "passing out"). Delinquency was measured by the frequency of engaging in 19 delinquent activities (e.g., destroyed public property, stole car, sold illegal drugs) over the past six months. Depressive symptomatology was measured by the Center for Epidemiological Studies Depression Survey (CEDS-D) (Radloff, 1977).

Procedure. Adolescents and their primary caregivers were recruited from a suburban high school district in Western New York. Adolescents completed materials in a 50-minutes testing session in their high school setting. Primary caregivers completed materials via a mail survey. Eighty-eight percent of the primary caregivers of the 311 adolescents completed mail survey materials.

RESULTS

Table 1 summarizes the Pearson correlations for childhood behavior problems and adolescent temperament. The majority of the correlations (68%) were statistically significant. There was some degree of specificity for the interrelations between childhood behavior problem subscale scores and particular temperament attributes. For instance, childhood hyperactivity/ impulsivity was highly correlated with general activity level and childhood peer dysfunction was significantly correlated with negative mood quality. In addition to these specific childhood behavior problem-temperament attribute interrelations, a general adolescent "difficult temperament" profile emerged as being associated with high levels of childhood behavior problems. Specifically, negative mood quality, high activity level, inflexibility, arrythmicity of biological functioning, high distractibility, and low persistence were associated with more childhood behavior problems.

Table 2 provides a summary of the Pearson correlations between adolescent temperament and problem behaviors. The majority of the correlations (58%) were statistically significant. A "difficult temperament" profile emerged as being associated with higher levels of adolescent alcohol consumption, alcohol-related problems, delinquency, and depression. The most potent interrelations were found for temperament and depressive symptoms.

CONCLUSION

Adolescent temperament, as measured by the DOTS-R (Windle & Lerner, 1986), correlated significantly both with retrospective measures of childhood behavior problems (e.g., hyperactivity/impulsivity, antisocial/oppositional behaviors) and current measures of problem behaviors (e.g., alcohol consumption, delinquency, depressive symptoms). In the latter instance, it is noteworthy that temperament was significantly associated with both internalizing and externalizing problems. A difficult temperament profile was associated with both childhood and adolescent behavior problems, suggesting some degree of continuity in temperamental behaviors that are associated with maladjustment across childhood and adolescence. Such findings encourage a closer examination of intra- and interpersonal processes that influence and are influenced by temperament across the lifespan.

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TABLE 1

Correlations Between Childhood HK/MBD Scales and Adolescent Temperament

Adolescent Temperament	Total (HK/MBD)	Hyperactivity/ Impulsivity	Antisocial/ Oppositional	Peer Dysfunction	Learning Problems
Activity level-general	.48***	.56***	.36***	-.01	.20*
Activity level-sleep	.24***	.28***	.21***	-.03	.05
Approach-withdrawal	.01	.02	.05	-.12*	.01
Flexibility-rigidity	-.30***	-.28***	-.21***	-.18***	-.16**
Mood quality	-.21***	-.14*	-.16**	-.21***	-.11*
Rhythmicity-sleep	-.13*	-.13*	.08	-.04	-.14*
Rhythmicity-eating	-.16**	-.09	-.10	-.07	-.15**
Rhythmicity-daily habits	-.11*	-.10	-.04	-.08	-.11*
Distractibility	-.28***	-.27***	-.17**	-.09	-.20***
Persistence	-.26***	-.27***	-.12*	-.17**	-.17**

*$p < .05$
**$p < .01$
***$p < .001$

TABLE 2

Correlations Between Adolescent Temperament and Adolescent Problem Behaviors

Adolescent Temperament	Alcohol Consumption	Alcohol Problems	Delinquency	Depressive Symptoms
Activity level-general	.21***	.18***	.21***	.20***
Activity level-sleep	.11*	.16**	.10**	.16**
Approach-withdrawal	.01	-.08	.06	-.21***
Flexibility-rigidity	-.17**	-.20***	-.20***	-.31***
Mood quality	-.09	-.18**	-.13*	-.48***
Rhythmicity-sleep	-.14*	-.12*	-.25***	-.22***
Rhythmicity-eating	-.07	-.09	-.14*	-.31***
Rhythmicity-daily habits	-.07	.01	-.16**	-.28***
Distractibility	-.16**	-.16**	-.19***	-.34***
Persistence	-.25***	-.21***	-.22***	-.36***

*$p < .05$
**$p < .01$
***$p < .001$